



Yuri Gershtein
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Education

- Ph.D., Institute for Theoretical and Experimental Physics, Moscow. Thesis: "A Study of $\bar{B}^0 \rightarrow D^{*-} l^+ \nu$ and $B^0 - \bar{B}^0$ Mixing Using Partial D^{*-} reconstruction", 1996
Advisor: M. Danilov
- B.Sc., Moscow Institute for Physics and Technology, 1992

Positions Held

2008 – current Assistant Professor of Physics at Rutgers University, Piscataway NJ
2004 – 2008 Assistant Professor of Physics at Florida State University, Tallahassee, FL
1999 – 2004 Research Associate at Brown University, Providence, RI
1996 - 1999 Research Scientist at Institute for Theoretical and Experimental Physics, Moscow, Russia.
1991 - 1995 Research Assistant at Institute for Theoretical and Experimental Physics, Moscow, Russia.

Experiments

2004 – present CMS Collaboration. Searches for physics beyond the Standard Model, electron and photon reconstruction and identification, test beam studies.
1997 – present DØ Experiment. Searches for physics beyond the Standard Model, photon and τ -lepton reconstruction and identification, track triggers, silicon detector assembly, muon scintillation counters design and production.
1994 – 1997 CMS Collaboration. Quartz Fiber Čerenkov calorimeter development and beam tests, case studies for Higgs discovery strategy, especially in WW and $\tau\tau$ decay modes
1994 HERA-B Collaboration. Rare τ decays
1993 GEM Collaboration. Muon system alignment.
1991 – 1999 ARGUS Experiment. Semileptonic B decays, $B^0 - \bar{B}^0$ mixing, D^0 decays.

Leadership positions

2009 – current US CMS Physics Coordinator (elected position)
 2009 – current Coordinator of the “High pT photon” group in CMS Exotica PAG
 2008 – 2009 Convener of the Photon+X Signature Group at the Fermilab’s LPC
 2006 – 2007 Convener of the DØ New Phenomena group
 2004 – 2007 Head of the Electron-Photon Group at the LHC Physics Center at FNAL.
 2003 – 2004 Convener of the DØ Common Samples Group
 2000 – 2003 Convener of the DØ Tau ID group
 1999 – 2000 Manager of the Silicon Barrel assembly project for the DØ Upgrade

Fellowships and Awards

- DOE Outstanding Junior Investigator, 2006
- Alikhanov's Fellowship, 1998

Publications

Co-author of 278 papers published in refereed journals. Total number of citations in refereed journals is 8658.

Recent DØ analyses with primary contributions from my group:

- “Search for Quirks with DØ detector” – in preparation
- “Search for Dark Photons” – arXiv:/0905.1478 [hep-ex], submitted to PRL
- “The $Z\gamma \rightarrow \nu\nu\gamma$ cross section measurement and limits on anomalous $ZZ\gamma$ and $Z\gamma\gamma$ couplings”, Phys. Rev. Lett. 102 , 201802 (2009)
- “Search for Long-Lived Parents of the Z Boson”, Phys. Rev. Lett. 101, 111802 (2008)
- “Measurement of the electron charge asymmetry in $p\bar{p} \rightarrow W+X \rightarrow e\nu+X$ events at $\sqrt{s}=1.96$ TeV”, Phys. Rev. Lett. 101, 211801 (2008)
- “First Evidence for Radiation Amplitude Zero in $W\gamma$ Production”, Phys. Rev. Lett. 100, 241805 (2008).
- “Search for Large Extra Dimensions in Mono-Photon Final State”, Phys. Rev. Lett. 101, 011601 (2008)
- “Search for a Light Higgs Boson in $\gamma\gamma+X$ Final State with DØ detector”, Phys. Rev. Lett. 101, 051801 (2008)
- “Search for SUSY in Di-Photon Final States at $\sqrt{s}=1.96$ TeV”, Phys. Lett. **B659**, 856 (2008)
- “Measurement of the $p\bar{p} \rightarrow WZ+X$ Cross Section at $\sqrt{s}=1.96$ TeV and Limits on WWZ Trilinear Gauge Couplings”, Phys. Rev. D 76, 111104(R) (2007)

Recent CMS notes

- CMS AN-2009/001 – Understanding Missing Transverse Energy in Di-Photon Events and Exotic Searches
- CMS AN-2008/004 - Search for massive resonance production decaying into an electron or a photon pair
- CMS IN-2008/xxx – Electromagnetic Energy Calibration Using Drell-Yan Balancing

- CMS IN-2007/064 -- Search for massive resonance production decaying into an electron or a photon pair: HEEP (High Energy Electrons and Photons) strategy toward first CMS data
- CMS AN-2007/045 -- Search for massive resonance production decaying into an electron or a photon pair
- CMS IN-2007/028 -- HEEP (High Energy Electrons and Photons) Strategy Toward First CMS Data

Recent Phenomenological Work

- “Discovering hidden sectors with mono-photon Z-prime searches”, Phys. Rev. D78:095002, 2008
- New Physics at the LHC: A Les Houches Report. Physics at TeV Colliders 2007 -- New Physics Working Group. arXiv:0802.3715 [hep-ph]
- Detecting Unexpected: UC Davis Workshop
<http://particle.physics.ucdavis.edu/workshops/unexpected07>

Recent Invited Talks

“Searches for New Physics at CMS and ATLAS” – Invited talk at the APS April Meeting, Denver, CO, May 2009
 “The Coming Era of Discoveries at the Large Hadron Collider” – Colloquium at Washington University of St Louis, Fall 2008
 “Tevatron Searches for Higgs Boson and Supersymmetry” – SLAC Summer Institute, August 2008
 “Searches for Gauge-Mediated Supersymmetry” - Invited talk at SUSY07, June 2007
 “Searches for Supersymmetry” - Invited talk at SUSY06, June 2006
 “News From the Energy Frontier”, Colloquium at University of Virginia, Spring 2006
 “New Results from Tevatron” - Invited talk at SESAPS, November 2005

Recent Seminars

Caltech (2008), Harvard (2007), Fermilab (2007), Rochester (2007), Illinois at Urbana-Champaign (2006), Maryland (2006), ITEP, Moscow (2007)

Service

Organized the 2008 Aspen Winter Conference on High Energy Physics “Revealing the Nature of the Electroweak Symmetry Breaking”
<http://conferences.fnal.gov/aspen/2008>

Organized the Mini-Workshop “Exploring New Phenomena at the Tevatron”
<http://home.fnal.gov/~gerstein/NPworkshop/>